Table 1 Clinical characteristics

	aVR0 group 1(n=140)	aVR+ group2(n=192)	aVR- group 3(n=114)	p value
Age(years)	60.60±10.47	63.86±9.71	61.47±11.11	0.051
male	106 (75.7%)	147 (76.6%)	102 (80.7)	0.603
smoking	68 (48.6%)	88 (45.8%)	66 (57.9%)	0.118
hypertension	94 (67.1%)	122 (63.5%)	69 (60.5%)	0.546
Hyperlipidemia	13 (9.3%)	14 (7.3%)	7 (7.0%)	0.744
diabetes	22 (15.7%)	46 (24.0%)	22 (19.1%)	0.172
Triple vessel lesion	10 (7.1%)	36 (18.8%)	21 (18.4%)	0.007
Left main lesion	5 (3.6%)	24 (12.5%)	6 (5.3%)	0.006
PCI	57 (40.7%)	61 (31.8%)	58 (50.91%)	0.004
CABG	10 (7.1%)	28 (14.6%)	12 (10.5%)	0.102
history of MI	10 (7.1%)	29 (15.1%)	6 (5.3%)	0.008
HR(beat/min)	71.72±13.60	73.56±14.14	73.54±12.64	0.420
Systolic BP(mmHg)	132.71±21.53	133.72±20.38	127.28±18.29	0.022
serum creatinine(umol/L)	75.11±16.2	79.30±20.84	75.29±15.87	0.064
Troponin I(ng/ml)	18.04±25.92	12.81±25.73	27.03±36.14	< 0.001

PCI= percutaneous coronary intervention, CABG= coronary artery by-pass graft, MI=myocardial infarction, HR=heart rate

CONCLUSION There is predictive value for ST-segment changes in lead aVR in patients with ACS. More adverse events existed in ST-segment elevation of aVR. The prognosis in other groups has better clinical results.

TCTAP A-007

Routine Follow-up Coronary Angiography Versus Clinical Follow-up Only in Acute ST-Segment Elevation Myocardial Infarction Patients Undergoing Primary Percutaneous Coronary Intervention with Drug-Eluting Stents: 3-Year Clinical Follow-up Results

Seung-Woon Rha,[1] Byoung Geol Choi,[1] Se Yeon Choi,[1] Shaopeng Xu,[2] Jabar Ali,[3] Harris Ngow,[4] Ji Bak Kim,[1] Cheol Ung Choi,[1] Eung Ju Kim,[1] Dong Joo Oh[1]
[1]Korea University Guro Hospital, Korea (Republic of); [2]Tianjin General Hospital, China; [3]Korea University Guro Hospital, Pakistan; [4]Hospital Tengku Ampuan Afzan, Malaysia

BACKGROUND It is unclear whether the routine follow up (FU) coronary angiography (CAG) regardless of patient's symptoms after successful primary percutaneous coronary intervention (PCI) with drug-eluting stents (DESs) in acute ST elevation myocardial infarction (STEMI) patients (pts) is beneficial or not.

METHODS The study population consisted of 447 consecutive STEMI patients (pts) underwent PCI with unrestricted utilization of DESs from January 2004 to May 2011. Routine FU CAG was performed between 6 to 9 months following index PCI and was decided by individual physician's discretion. Rests of the pts were clinically followed and ischemic driven events were captured. Clinical events including mortality, myocardial infarction (MI) and clinically driven PCI before 9 months were excluded in both groups. Cumulative clinical outcomes up to 3 years were compared between the Routine CAG group (n = 244 pts) and Clinical FU group (n = 203 pts). To adjust potential confounders, a propensity score matched (PSM) analysis was performed using the logistic regression model.

RESULTS After PSM analysis, 2 propensity-matched groups (129 pairs, n = 258 pts, C-statistic = 0.762) were generated and the baseline characteristics of the two groups were balanced. At 3 years, the incidence of individual hard endpoints including mortality, MI, major adverse cardiac events (MACEs) were similar between the two groups excepted that Routine CAG group had higher incidence of any revascularization, particularly non-target vessel revascularization (NTVR) than the control group (Table).

CONCLUSION Despite the expected beneficial effects, routine FU CAG following index primary PCI with DESs in STEMI pts was associated with higher incidence of repeat PCI including NTVR up to 3-year clinical follow-up.

Table. Clinical Outcomes up to 3-years after propensity score matched analysis

Variable, N (%)	Total (n=258)	Routine CAG (n=129)	Control (n=129)	p Value	Hazard ratio (95% C.I)	p Value
Total death	5 (1.9)	2 (1.5)	3 (2.3)	ns	-	-
Myocardial infarction: MI	6 (2.3)	2 (1.5)	4 (3.1)	0.684	-	-
Revascularizations	30 (11.6)	21 (16.2)	9 (6.9)	0.020	2.54 (1.06-6.04)	0.035
Target lesion: TLR	18 (6.9)	11 (8.5)	7 (5.4)	0.328	-	-
Target vessel: TVR	21 (8.1)	13 (10.0)	8 (6.2)	0.255	-	-
Non-Target vessel: NTVR	14 (5.4)	11 (8.5)	3 (2.3)	0.028	4.22 (1.04-17.1)	0.044
Stent thrombosis	2 (0.7)	1 (0.7)	1 (0.7)	ns	-	-
TLR MACE	22 (8.5)	12 (9.3)	10 (7.7)	0.656	-	-
TVR MACE	28 (10.8)	16 (12.4)	12 (9.3)	0.423	-	-

TCTAP A-008

Comparison of Sirolimus-, Everolimus-, Biodegradable Polymer Stent, and Endothelial Progenitor Cell Capture Stent in Patients with ST-Elevation Myocardial Infarction

Seung-Jung Park,[1] Hyun Woo Park,[1] Se Hun Kang,[1] Min Su Kim,[1] Hee-soon Park,[1] Byeong Joo Bae,[1] Sang Soo Cheon,[1] Jae Hyung Roh,[1] Pil Hyung Lee,[1] Mineok Chang,[1] Sung Han Yoon,[1] Jung-Min Ahn,[1] Duk-Woo Park,[1] Soo-Jin Kang,[1] Seung-Whan Lee,[1] Young-Hak Kim,[1] Cheol Whan Lee,[1] Seong-Wook Park[1]
[1]Asan Medical Center, Korea (Republic of)

BACKGROUND We compared the efficacy and safety of sirolimus-eluting stents with Parylene C (SESs), everolimus-eluting stents with poly n-butyl methacrylate (EESs), biodegradable stent (BP-DESs), and endothelial progenitor cell capture stents (EPCCSs).

METHODS From the IRIS-DES registry, we identified 1517 patients treated using PCI with SESs (N = 372), EESs (N = 405), BP-DESs (N = 300), and EPCCSs (N = 440) in ST-elevation myocardial infarction (STEMI). Major adverse cardiac events (MACE) were defined using composite of death, myocardial infarction, and target vessel revascularization at 24 months.

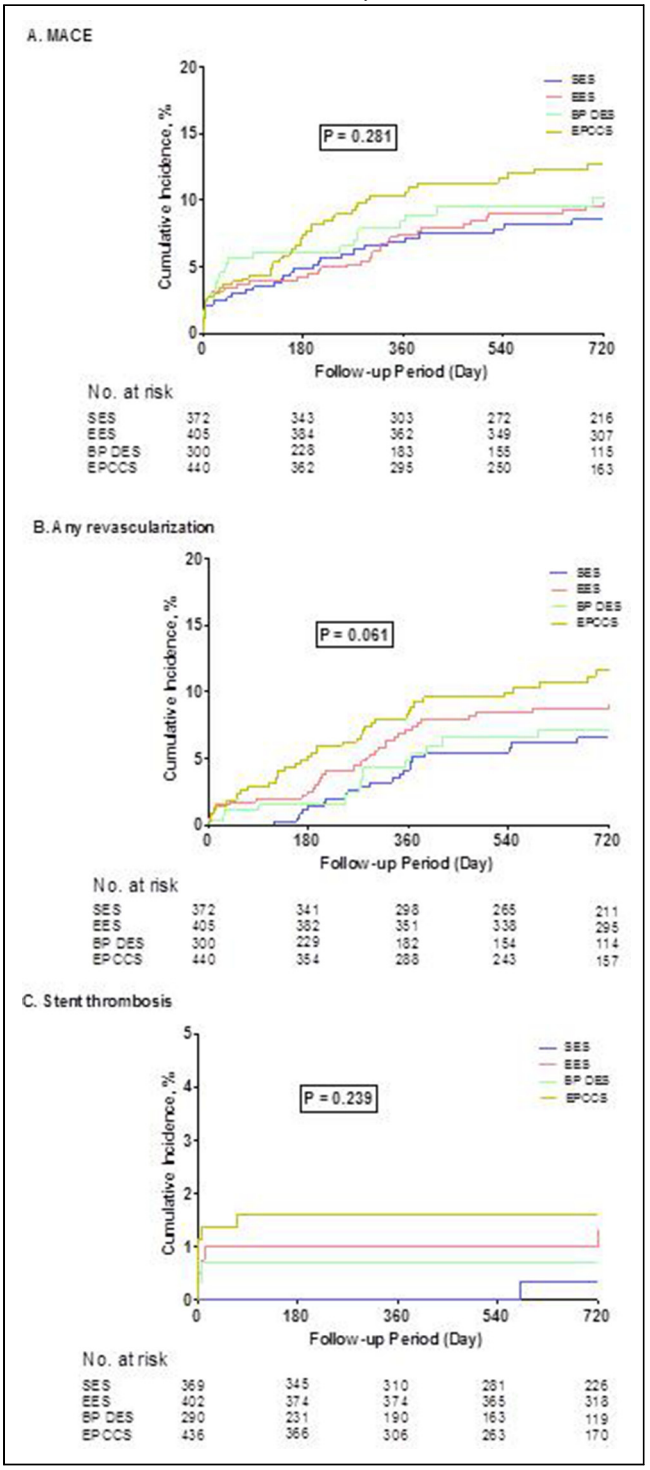
RESULTS The average number of stent used was 1.6 ± 0.8. At 2 years, there was no difference in the incidence of MACE (8.5% in SESs, 9.9% in EES, 10.2% in BP-DES, and 12.8% in EPCCS, P = 0.281), death (5.0% in SESs, 4.3% in EES, 4.4%in BP-DES, and 6.2% in EPCCS, P = 0.718), MI (0.6% in SESs, 1.6% in EES, 1.5%in BP-DES, and 1.5% in EPCCS, P = 0.572), and TVR (3.8% in SESs, 5.9% in EES, 4.8% in BP-DES, and 6.5% in EPCCS, P = 0.313). The EPCCSs group showed trend of higher rate in any revascularization, but no significantly statistical difference (6.6% in SESs, 9.1% in EES, 7.2% in BP-DES, and 11.6% in EPCCS, P = 0.313). The cumulative rates of Academic Research Consortium defined definite stent thrombosis were 0.3% in SESs, 1.2% in EESs, 0.7% in BP-DESs, and 1.6% in EPCCSs (P = 0.239).

CONCLUSION The 4 different DESs showed no significant difference in clinical outcome at 2-year follow-up in patients with STEMI.

Table 1. Baseline characteristics of the patients

Variables	Sirolimus-eluting stent (N = 372)	Everlimus-eluting stent (N = 405)	Biodegradable polymer stent (N = 300)	Endothelial cell capture coating stent (N = 440)	P-value
Clinical characteristics					
Age, years	61.8 ± 12.2	61.3 ± 13.4	61.0 ± 11.6	62.1 ±11.7	0.638
Male sex	282 (76%)	313(77%)	247(82%)	347(79%)	0.211
Body mass index	24.2 ± 3.3	24.2 ± 3.3	24.1 ± 2.9	24.1 ± 3.2	0.969
Diabetes	108 (29%)	112 (27%)	72 (24%)	111 (25%)	0.422
Hypertension	178 (48%)	210 (52%)	144 (48$)	215 (49%)	0.739
Hyperlipidemia	97 (26%)	118 (29%)	72 (24%)	139 (32%)	0.104
Previous PCI	38 (10%)	33 (8%)	13 (4%)	23 (5%)	0.007
Previous myocardial infarction	32 (9%)	16 (4%)	12 (4%)	17 (4%)	0.005
Previous congestive heart failure	9 (2%)	10 (3%)	3 (1%)	5 (1%)	0.258
Previous CABG	5 (1%)	3 (1%)	1 (1%)	0 (0%)	0.083
Chronic renal failure	8 (2%)	9 (2%)	5 (2%)	8 (2%)	0.944
Peripheral vascular disease	4 (1%)	3 (1%)	1 (1%)	1 (1%)	0.398
Chronic obstructive pulmonary disease	10 (3%)	15 (4%)	5 (2%)	8 (2%)	0.253
Angiographic characteristics					
Number of diseased vessels					< 0.001
Single vessel disease	170 (46%)	221 (54%)	174 (58%)	271 (62%)	
Two vessel disease	111 (30%)	109 (27%)	79 (26%)	117 (27%)	
Triple vessel disease	78 (21%)	59 (15%)	42 (14%)	46 (11%)	
Left main involvement	13 (4%)	19 (5%)	5 (2%)	6 (1%)	
Multivessel disease	202 (54%)	187 (46%)	126 (42%)	169 (38%)	< 0.001
Procedure characteristics					
Number of stent	1.6 ± 0.9	1.6 ± 0.9	1.3 ± 0.6	1.4 ± 0.5	< 0.001
Average diameter of stent (mm)	3.2± 0.5	3.4± 0.6	3.3± 0.6	3.5± 0.6	<0.001
Total stent length (mm)	42.5± 25.7	35.5± 21.9	27.8± 14.2	29.3± 14.7	<0.001
Antiplatelet agent					
Dual antiplatelet agent at discharge	350 (99.4%)	378 (99.0%)	264 (92%)	391 (94.2%)	< 0.001

Table 2. Cumulative incidence rate of clinical outcome at 2 years



TCTAP A-009

Clinical Outcome of Preventive Angioplasty in ST-Elevation Myocardial Infarction

Jae Hyung Roh,[1] Hyun Woo Park,[1] Se Hun Kang,[1] Min Su Kim,[1] Hee-soon Park,[1] Byeong Joo Bae,[1] Sang Soo Cheon,[1] Pil Hyung Lee,[1] Mineok Chang,[1] Sung Han Yoon,[1] Jung-Min Ahn,[1] Duk-Woo Park,[1] Soo-Jin Kang,[1] Seung-Whan Lee,[1] Young-Hak Kim,[1] Cheol Whan Lee,[1] Seong-Wook Park,[1] Seung-Jung Park[1]
[1]Asan Medical Center, Korea (Republic of)

BACKGROUND The aim of this study was to evaluate the clinical outcome of preventive angioplasty in ST-elevation Myocardial Infarction.